AUGUST 14, 2008

QUARTERLY MONITORING REPORT
SECOND QUARTER 2008
GROUNDWATER TREATMENT SYSTEM
HENDERSON, NEVADA

HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

JURAT

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.

For the services provided and attested to with this Jurat including the collection of groundwater samples from the Consent Order monitor wells and transect wells and analytical laboratory coordination:

I hereby certify that, with the exceptions noted below, all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein. The exceptions are as follows:

- p-Chlorothioanisole (4-chlorophenyl methyl sulfide) using EPA Method 8270C for Consent Order monitor well groundwater sample analyses. NDEP has certified Test America, Inc. for EPA Method 8270C. However, the laboratory has not been certified for p-chlorothioanisole using this method. The laboratory has submitted the necessary documents and information to NDEP as part of the certification process, but has not received a response from NDEP to date.

- Dimethyl disulfide using EPA Method 8260B for Consent Order monitor well groundwater sample analyses. NDEP has certified Test America, Inc. for EPA Method 8260B. However, the laboratory has not been certified for dimethyl disulfide using this method. The laboratory has submitted the necessary documents and information to NDEP as part of the certification process, but has not received a response from NDEP to date.

- Carbophenothion and phosmet using EPA Method 8141 for Consent Order monitor well groundwater sample analyses. Test America, Inc. is not certified for this analysis. Test America, Inc. subcontracted these analyses to Silver State Labs, who in turn subcontracted the analyses to Anatek Labs, Inc.

- Uranium and Radon-222 using EPA Method 6020 and Standard Method 7500 Rn B for Transect monitor well groundwater sample analyses. NDEP has certified GEL Laboratories LLC for EPA Method 6020. However, the laboratory has not been certified for uranium using this method. The laboratory has submitted the necessary documents and information to NDEP as part of the certification process, but has not received a response from NDEP to date. GEL Laboratories LLC is not certified for the Radon-222 analysis. Radon-222 is not on the Nevada list for certification.

de maximis, *inc*.

Edward Modiano
GWTS Program Manager
Nevada Certified Environmental Manager
EM No. 2107; Expires October 18, 2009

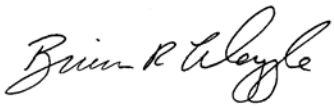
Date Signed: August 14, 2008

JURAT

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.

For the services provided and attested to with this Jurat including the compilation of data and information collected by other firms pertaining to the groundwater treatment system for incorporation into this summary report:

HARGIS + ASSOCIATES, INC.



Brian R. Waggle, RG, CEM
Senior Hydrogeologist
Nevada Certified Environmental Manager
No. EM - 1903 (Expires 05/27/10)

Date Signed: August 14, 2008

HARGIS + ASSOCIATES, INC.

Michael R. Long, RG, CEM
Principal Hydrogeologist
Nevada Certified Environmental Manager
No. EM - 1891 (Expires 05/27/10)

Date Signed: August 14, 2008

JURAT

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.

For the services provided and attested to with this Jurat including the collection of influent and effluent samples from the groundwater treatment system and analytical laboratory coordination:

I hereby certify that, with the exceptions noted below, all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein. Exceptions are as follows:

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- Dimethyl disulfide using EPA Method 8260B for influent and effluent sample analyses. NDEP has certified Test America, Inc. for EPA Method 8260B. However, the laboratory has not been certified for dimethyl disulfide using this method. The laboratory has submitted the necessary documents and information to NDEP as part of the certification process, but has not received a response from NDEP to date.

STEWART ENVIRONMENTAL, INC.

Keith R. Stewart

Keith R. Stewart, CEM
President
Nevada Certified Environmental Manager
No. EM - 1111 (Expires 12/01/08)

Date Signed: 8-12-08

HARGIS + ASSOCIATES, INC.
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August 14, 2008

VIA FEDERAL EXPRESS

Dr. Marysia Skorska & Mr. Brian Rakvica
Nevada Division of Environmental Protection
2030 E. Flamingo Road, Suite 230
Las Vegas, Nevada 89119

Re: Transmittal of Quarterly Monitoring Report, Second Quarter 2008;
Henderson Groundwater Treatment System, Henderson, Nevada

Dear Dr. Skorska and Mr. Rakvica:

Enclosed is the document titled:

Quarterly Monitoring Report
Second Quarter 2008
Henderson Groundwater Treatment System
Henderson, Nevada

If you have any questions, please contact me at the number listed above.

HARGIS + ASSOCIATES, INC.

Brian R. Waggle, RG, CEM
Senior Hydrogeologist
State of Nevada CEM No. 1903 (Exp 05/27/10)

BRW/erl

Enclosure

cc: Mr. Paul Sundberg, Independent Consultant
Mr. Joseph Kelly, Montrose Chemical Corporation of California
Mr. Curt Richards, Olin Corporation
Mr. Mike Bellotti, Olin Corporation
Mr. Lee Erickson, Stauffer Management Company
Mr. Larry Hall, Stauffer Management Company
Mr. George Crouse, Syngenta Crop Protection, Inc.
Mr. Grant Williams, Geosyntec
Mr. Kelly Richardson, Latham and Watkins
Ms. Susan Crowley, Tronox
Mr. Dennis England, E2 Environmental, Inc.
Mr. Ed Modiano, *de maximis, inc.*
Mr. Nick Pogoncheff, PES Environmental

Other Offices:
San Diego, CA
Tucson, AZ

QUARTERLY MONITORING REPORT

SECOND QUARTER 2008

HENDERSON GROUNDWATER TREATMENT SYSTEM

HENDERSON, NEVADA

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ACRONYMS AND ABBREVIATIONS

µg/L	micrograms per liter
BHC	benzene hexachloride
DAQEM	Clark County Department of Air Quality and Environmental Management
EPA	U.S. Environmental Protection Agency
GAC	granular activated carbon
gpm	gallons per minute
GWTS	groundwater treatment system
H+A	Hargis + Associates, Inc.
LGAC	liquid phase granular activated carbon
MCL	maximum contaminant level
Montrose	Montrose Chemical Corporation of California
NDEP	Nevada Division of Environmental Protection
Olin	Olin Corporation
PRGs	preliminary remediation goals
SSAL	Silver State Analytical Laboratories
Stauffer	Stauffer Chemical Company
SMC	Stauffer Management Company, LLC
SWT	selected wellhead treatment
TAMI	TestAmerica Analytical Corporation
TTHMs	total trihalomethanes
VOCs	volatile organic compounds

QUARTERLY MONITORING REPORT
SECOND QUARTER 2008
HENDERSON GROUNDWATER TREATMENT SYSTEM
HENDERSON, NEVADA

1.0 INTRODUCTION

This quarterly monitoring report presents a summary of the operation and monitoring of the Henderson Groundwater Treatment System (GWTS), located in Henderson, Nevada for the second quarter 2008 (Figure 1).

1.1 BACKGROUND

The GWTS is operated under a Consent Order between the State of Nevada, Stauffer Chemical Company (Stauffer), and the Montrose Chemical Corporation of California (Montrose) to remediate contaminated groundwater and has been operational since December 1983 (State of Nevada, 1983). Presently, the GWTS is operated by *de maximis, inc*. with technical assistance provided by Olin Corporation (Olin) (formerly Pioneer Americas, LLC), Montrose, and Stauffer Management Company, LLC (SMC). Olin, Montrose, and SMC are collectively referred to herein as "the Companies".

The purpose of the GWTS is to extract and treat contaminated alluvial aquifer groundwater migrating northward from the former Stauffer and Montrose facilities located within the Olin property at the Black Mountain Industrial Center. Contaminated groundwater is extracted from the alluvial aquifer by 13 extraction wells. The flow from selected extraction wells having elevated concentrations of volatile organic compounds (VOCs) is routed through a carbon adsorption unit (referred to as the Selected Wellhead Treatment [SWT] unit) to reduce the VOC load on the downstream air stripper. The pre-treated groundwater is then combined with extracted groundwater from the remainder of the extraction wells and treated using air-stripping followed by activated carbon adsorption (referred to as the granular activated carbon [GAC]

system). The treated groundwater is then returned to the alluvial aquifer downgradient of the extraction wells via three below-grade recharge trenches. The process flow diagrams for the GWTS are illustrated in Figures 2 through 4.

The Consent Order requires quarterly groundwater sampling and analyses for selected VOCs and other organic compounds (State of Nevada, 1983). Groundwater sampling is conducted at two upgradient well locations identified as Consent Order monitor wells H-18A and H-21R; and three downgradient well locations identified as Consent Order monitor wells H-49A, H-56A, and H-58A. Pertinent GWTS features and Consent Order monitor well locations are illustrated on Figure 5. Figure 6 presents a geologic cross-section along the extraction well line that illustrates groundwater level elevations monitored in April 2008 with respect to the major hydrogeologic units underlying the wellfield.

1.2 OVERVIEW OF SECOND QUARTER 2008 OPERATIONS

The GWTS operated throughout the second quarter 2008. Extracted groundwater was treated by 1) the SWT system, and 2) by a combination of the GWTS air stripper and the GAC system that treats all extracted groundwater to remove VOCs, pesticides and semi-VOCs. No modifications of the treatment system occurred during the second quarter while both routine and non-routine maintenance was conducted.

Groundwater levels were monitored in the GWTS extraction wells, monitor wells, and piezometers located in the vicinity of the GWTS to generate contours for capture analysis and reporting pursuant to the Consent Order. In addition to the routine GWTS process monitoring/sampling and Consent Order well sampling, groundwater samples were collected from seven transect monitor wells located immediately downgradient of the GWTS. The purpose of this additional groundwater sampling is to evaluate the impacts of the operation and/or improvements to the GWTS on groundwater quality as soon as practicable. The transect wells are located approximately 500 feet downgradient of the GWTS; whereas the three downgradient Consent Order wells are located greater than 1,500 feet from the GWTS (Figure 5).

2.0 CONSENT ORDER MONITOR WELL GROUNDWATER SAMPLING

Groundwater samples were collected during the second quarter from Consent Order monitor wells H-18A, H-21R, H-49A, H-56A, and H-58A on April 2 and 3, 2008 by Converse Consultants. Groundwater samples were collected from each monitor well using a decontaminated submersible pump with the intake placed at the approximate midpoint of each screened interval. Groundwater samples are collected using a low flow sampling technique as detailed in the Standard Operating Procedures prepared by Hargis + Associates, Inc. ([H+A], 2007). The groundwater samples were analyzed for the following parameters as required by the Consent Order:

All Consent Order Monitor Wells

- VOCs using U.S. Environmental Protection Agency (EPA) Method 8260B.
- p-Chlorothioanisole using EPA Method 8270C.

Upgradient Consent Order Monitor Wells Only

- Selected organic acids using high performance liquid chromatography.
- Consent Order pesticides (phosmet and carbophenothion) using EPA Method 8141A.

All chemical analyses were conducted by TestAmerica Analytical Testing Corporation (TAMI) or by TAMI subcontractor laboratories (Alpha Analytical and Anatek Labs, Inc.). Analytical laboratory reports and field sampling forms are provided (Appendix A).

The results of the chemical analyses are summarized in Table 1. Graphs illustrating concentration trends of benzene, chlorobenzene and chloroform for each Consent Order monitor well are provided in Appendix B. These chemicals have been selected for presentation because they are the predominant VOCs present in the GWTS area. The graphs are structured to illustrate trends in concentrations over the total duration of the monitoring program and for the last five years. A water level hydrograph illustrating water level elevations for each Consent Order monitor well over the total duration of the monitoring program is also included in Appendix B.

The graphs also include Maximum Contaminant Level (MCL) concentration lines for each of the three compounds plotted. For chloroform, the MCL cited is the 80 micrograms per liter (µg/L) established by EPA for total trihalomethanes (TTHMs) in drinking water. Chloroform is one of the components of TTHMs along with bromodichloromethane, dibromochloromethane, and bromoform. Of the TTHMs, only chloroform was present in second quarter 2008 groundwater samples.

2.1 UPGRADIENT RESULTS

VOCs, p-chlorothioanisole, and Consent Order pesticides were not detected above their respective limits of detection in the groundwater sample collected at monitor well H-18A during the second quarter 2008 (Table 1; Appendix A).

p-Chlorothioanisole and Consent Order pesticides were not detected in the groundwater sample collected at monitor well H-21R during the second quarter 2008, while two VOCs and three organic acids were detected above their respective limits of detection (Table 1; Appendix A). The detected compounds were detected in first quarter 2008 samples at similar concentrations as detected in the second quarter 2008 samples with the exception of the organic acid diethyl phosphorodithioic acid. This compound was detected in the second quarter 2008 samples at 140,000 µg/L, compared to the first quarter 2008 result of 87,000 µg/L.

Water quality data for the upgradient Consent Order monitor wells during the past five years were reviewed to determine if the second quarter 2008 concentrations of chlorobenzene, benzene, and chloroform exceeded historical detected ranges for these compounds (period of record February 2003 to January 2008). Chloroform was not detected in the two upgradient wells in the second quarter 2008. The benzene concentration of 43,000 µg/L at monitor well H-21R exceeded its historical range of detection. The previous maximum concentration was 34,000 µg/L detected in the January 2008 sample collected from this well. The chlorobenzene concentration at monitor well H-21R fell within the historical range of detection.

The detected concentrations in the upgradient monitor well groundwater samples were compared to the MCLs to identify any exceedances in second quarter 2008 samples. If an MCL was not available for a compound, then the EPA Region VI Preliminary Remediation Goals

(PRGs) for tap water were used for the comparison. Starting with this report, the Region VI values will replace the previously-used Region IX values based on a request of the Nevada Division of Environmental Protection ([NDEP], 2008c). The MCL and PRG values are displayed on Table 1.

MCLs were exceeded in the groundwater sample collected from upgradient Consent Order monitor well H-21R for benzene and chlorobenzene. During the first quarter 2008, the compound 1,4-dichlorobenzene also exceeded its MCL. It was not possible to determine if this compound also exceeded the MCL in the second quarter 2008 samples due to an elevated laboratory reporting limit for this compound. For those compounds that had no MCL established, none exceeded their respective PRG (Table 1).

2.2 DOWNGRADIENT RESULTS

A limited number of VOCs were detected in the groundwater samples collected from the three downgradient Consent Order monitor wells during the second quarter 2008 including: 1,1-dichloroethane, 1,2,4-trichlorobenzene, 1,2- and 1,4-dichlorobenzene, chloroform, tetrachloroethene, and trichloroethene (Table 1; Appendix A). p-Chlorothioanisole was not detected in any of the groundwater samples collected from the downgradient Consent Order monitor wells.

Water quality data for the downgradient Consent Order monitor wells during the past five years were reviewed to determine if the second quarter 2008 concentrations of chlorobenzene, benzene, and chloroform exceeded historical detected ranges for these compounds. Benzene and chlorobenzene were not detected in these wells in the second quarter 2008. The concentration of chloroform did not exceed the historical maximum concentrations detected in samples collected from downgradient Consent Order monitor wells (period of record February 2003 to January 2008).

The detected concentrations in the downgradient monitor well samples were compared to the MCLs and PRGs to identify any exceedances in second quarter 2008 samples. None of the detected compounds exceeded their respective MCL. For those compounds that had no MCLs established, none exceeded their respective PRG (Table 1).

3.0 SYSTEM OPERATION AND MONITORING

This section summarizes GWTS operational and monitoring data, and GWTS area water level and wellfield capture conditions. This section also provides a summary of air and groundwater quality compliance for the second quarter 2008.

3.1 OPERATION

All extraction wells were operational during the second quarter 2008. However, certain wells were off-line for short periods of time due to: 1) maintenance of various well components; 2) system shutdowns for GAC changeout and maintenance; 3) system shutdowns for cleaning of the air stripper, or 4) system shutdowns for electrical and generator service.

For the quarter, the overall total extraction well flowrate averaged 209 gallons per minute (gpm). During the past four quarters, the average overall extraction well flowrate for the quarter has been in the range of 166 to 212 gpm. The total volume of groundwater processed during the second quarter 2008 was 27,639,100 gallons. A graph illustrating the quarterly volume of groundwater processed since 1999 is presented in Figure 7.

All treated effluent was discharged to the eastern, center, and western recharge trenches during the second quarter 2008.

3.2 INFLUENT AND EFFLUENT MONITORING

Influent and effluent samples were collected and analyzed during the second quarter 2008 pursuant to the Consent Order. The sampling ports used to collect samples from the treatment system are illustrated on Figure 3. All influent and effluent samples were analyzed for:

- VOCs including benzene, chlorobenzene, chloroform, dimethyl disulfide, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,3-dichlorobenzene, and 1,2,4-trichlorobenzene using EPA Method 8260B, and
- p-Chlorothioanisole using EPA Method 8270C.

The Companies changed the analytical laboratory used for the analysis of system monitoring samples starting at the beginning of the second quarter 2008 from Silver State Analytical Laboratories (SSAL) to TAMI (Table 2). The change of laboratories was made to improve the timeliness of electronic data deliverables to the Companies.

Influent Monitoring Results

Concentrations of VOCs detected in influent samples were generally consistent throughout the second quarter 2008 with the exception of composite samples collected during three successive weekly samples starting on May 9 (Table 2; Figure 8). During that period, concentrations of benzene increased approximately two-fold. The other detected VOCs in the influent also increased but to a lesser extent. Review of the system logs indicated the only notable change from normal operations during this particular time period was a decrease of extraction well B average pumpage rate from about 66 gallons per minute to between 55 to 60 gallons per minute. It is improbable that this reduction would have had the effect observed in the influent concentrations. It is likely that a higher load of VOCs was being produced by the extraction wells for a limited period of time.

Due to this condition, maximum concentrations of benzene, chloroform, and chlorobenzene detected in the influent samples were all greater than the maximum concentrations detected in samples collected during the first quarter 2008 as summarized in the table below.

Compound	Maximum Concentration For First Quarter 2008 (µg/L)	Maximum Concentration For Second Quarter 2008 (µg/L)
Benzene	3,387	7,100
Chloroform	1,910	1,300
Chlorobenzene	6,690	3,500

The VOC compounds 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, and were also detected at concentrations greater than the first quarter 2008 maximum

concentrations. Conversely, the VOC compound 1,2,4-trichlorobenzene was detected at concentrations less than the first quarter 2008 maximum concentration (Table 2).

The VOC compound dimethyl disulfide was detected in two of the weekly composite samples collected during the second quarter 2008. This compound has not been previously detected in influent weekly composite samples (period of record January 2006 through March 2008). The composite sample collected during the week ending April 11 was inadvertently not analyzed for this compound. Detection of this compound is likely associated with the change in analytical laboratory. TAMI reported this compound at lower quantitation limits in the second quarter 2008 samples than did SSAL for the historical composite samples.

Air Stripper Effluent Monitoring Results

The air stripper effluent samples were analyzed for VOCs including eight parameters listed above using EPA Method 8260B to evaluate treatment performance. The results of the chemical analyses are summarized in Table 2. These samples were collected for the purpose of evaluating system performance and providing data for air permit reporting.

GWTS Discharge Monitoring Results

Chloroform was detected in the system effluent samples (liquid phase granular activated carbon [LGAC] Discharge) collected during April through June 2008 at concentrations less than 10 µg/L. None of the detected concentrations in these samples for chloroform exceeded the weekly or monthly Consent Order discharge limits (Table 2). The VOC dimethyl disulfide was also detected in the system effluent samples at concentrations at or less than 6.0 µg/L. None of the detected concentrations in these samples for dimethyl disulfide exceeded the weekly or monthly Consent Order discharge limits (Table 2). These detections are probably due to the change in analytical laboratory, as discussed above.

3.3 MASS REMOVED

The total mass of VOCs removed during the second quarter 2008 was approximately 2,319 pounds (Table 3). This mass represents approximately 549 pounds of VOCs removed by

activated carbon, and approximately 1,770 pounds of VOCs removed by air stripping. A graph illustrating the mass removed since 1999 is presented in Figure 9.

3.4 AIR PERMIT COMPLIANCE

Except for maintenance conducted as described in Section 4.1, the air stripper operated continuously during the second quarter 2008, during which approximately 1,770 pounds of VOCs were treated (Table 3). The combined total VOCs treated during the first half of 2008 was 2,832 pounds of VOCs. The January 12, 2006 Clark County Department of Air Quality and Environmental Management (DAQEM) permit allows a maximum of 4,400 pounds of VOCs annually (calendar year). The Companies are monitoring the discharge of VOCs closely and will direct flow from selected extraction wells to the SWT on an as-needed basis to prevent the air emissions limit being exceeded.

3.5 TRANSECT GROUNDWATER MONITORING PROGRAM

A special groundwater sampling program has been conducted by the Companies at a transect of monitoring wells located directly downgradient of the GWTS approximately on a quarterly basis since March 2004. This transect was sampled again during the second quarter 2008. The original purpose of this sampling program was to evaluate the effectiveness of the GWTS renovations and upgrades by monitoring concentrations of selected VOCs, pesticides, and organic acids in groundwater immediately downgradient of the GWTS. The location of the transect wells are nearer to the GWTS recharge trenches than the three downgradient Consent Order monitoring wells and, therefore, will reflect changes in groundwater conditions caused by the renovations and upgrades prior to the Consent Order monitor wells. This provides a more timely assessment of changes in groundwater quality attributed to the upgrade program. While the upgrade program is now complete, the special sampling of the downgradient transect has been retained by the Companies to assist in the overall evaluation of capture effectiveness.

VOC and Pesticide Results

The sampling program consisted of the collection of groundwater samples from seven alluvial aquifer monitor wells located immediately downgradient of the GWTS recharge trenches during

April 9 and April 16, 2008 (Figure 5). All samples were analyzed for VOCs by Method 8260B and pesticides by Method 8081A. Table 4 presents the analytical data for the second quarter 2008 samples along with detection limits and the applicable MCLs and PRGs for the individual analytes. Similar to the Consent Order data compilations, the EPA Region VI PRGs are presented in this table. Copies of the complete analytical reports for the samples are included in Appendix A. The following provides a brief discussion of the transect sampling results as requested by NDEP (2008b).

A limited number of VOCs were detected in the groundwater samples collected from the seven transect monitor wells during the second quarter 2008 (Table 4; Appendix A). These VOCs include: 1,1-dichloroethane, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichorobenzene, 1,4-dichlorobenzene, benzene, chloroform, chlorobenzene, and tetrachloroethene. The MCL for benzene was exceeded in the groundwater sample collected from transect monitor well MC-50. The MCL for chlorobenzene was exceeded in the groundwater sample collected from transect monitor well MC-49. The remaining VOC concentrations were either less than MCLs or the particular VOC did not have an established MCL. Hydrographs in Appendix B illustrate the changes in chlorobenzene, benzene, and chloroform concentrations during the time period during which the transect program has been conducted.

Three pesticides (alpha-, beta-, and delta-benzene hexachloride [BHC]) were detected in the majority of the transect monitor well samples. Concentration ranges for the compounds were as follows:

	Detected Concentrations in Second Quarter 2008 samples (µg/L)	
Compound	Minimum	Maximum
alpha-BHC	0.22	4.4
beta-BHC	2.6	15
delta-BHC	0.57	1.7

The pesticide gamma-BHC (lindane) was detected at a concentration of 0.19 µg/L in the sample collected from transect monitor well MC-50. This was the only detection of lindane during the second quarter 2008 and this concentration did not exceed the MCL of 0.2 µg/L. The results of all pesticides analyses during the second quarter 2008 are presented in Table 4.

Radiochemical Results

Analysis of selected radiochemicals was performed on the transect samples during the second quarter 2008 on a one-time basis. The radiochemicals included uranium analyzed by Method 6020, radium-226 and radium-228 analyzed by Methods 903.1 and 904.0, respectively, and radon-222 analyzed by Standard Method 7500. The results of the radiochemical analyses are also presented in Table 4.

Of the radiochemicals, uranium exceeded the MCL of 30 µg/L in the groundwater samples collected from monitor wells MC-50, MC-51, and MC-53 (Table 4). The remaining radiochemical concentrations were either less than MCL concentrations or the particular constituent did not have an established MCL.

4.0 SYSTEM STATUS

4.1 GROUNDWATER TREATMENT SYSTEM MAINTENANCE

Maintenance of the GWTS extraction and treatment system during the second quarter 2008 consisted of routine maintenance, backwashing of the two 5,000 pound LGAC vessels, changing of bag filters, cleaning the air stripper trays to remove bio-fouling, replacement of air stripper components, and minor repairs and equipment replacements at several wells. Non-routine maintenance activities were associated with the electrical power supplying the GWTS and replacement of the LGAC backwash pump.

Routine GWTS Maintenance

Routine GWTS maintenance activities were performed during the second quarter 2008. Routine maintenance activities included the inspection of pumps, flow meters, valves, pipelines, pressure gages, electrical connections, and other miscellaneous components to ensure that the GWTS continued to operate as designed. The stripping trays were cleaned monthly during the second quarter 2008 and backwashing of the carbon was performed on an as-needed basis.

LGAC System

During the first quarter of 2008, the carbon supplier was changed from Baker to Siemens; the previously existing backwash pump was replaced with a new 5-horsepower pump; and the diffusers were replaced. These efforts resulted in better flow characteristics across the carbon bed during the second quarter 2008 and the need for backwashing was reduced.

GWTS Modifications

No process or equipment modifications took place during the second quarter 2008.

Non Routine Maintenance (Electrical Supply)

During the quarter, Basic Power Corporation brought the two filter capacitor banks upstream of the GWTS back online. These banks are used to filter harmonics off the power line and maintain harmonic distortion within tolerance, normally less than 3 percent total harmonic distortion. Harmonics on a power line cause general degradation and/or failure of devices, such as pumps and computer programmed equipment over time. While harmonics are not uncommon on electrical power grids and occur at varying levels on a daily basis; the levels of harmonic distortion in power delivered to the GWTS are significantly beyond acceptable limits. Unfortunately, the capacitor banks operated online for only three days before another failure occurred on June 26th. The Companies continue to evaluate alternatives to relying upon Basic Power Corporation to reduce the harmonics.

4.2 SWT MAINTENANCE

The SWT system ran nominally without significant problems during the second quarter 2008.

4.3 GROUNDWATER LEVEL MONITORING AND HYDRAULIC CAPTURE

A groundwater elevation contour map was constructed from data for the period April 1 through 7, 2008 using water level measurements collected from 112 locations in the alluvial aquifer. Using the same methods as used in previous quarters, the water level data were initially contoured using Surfer 7.0 and then adjusted by hand using professional judgment and the current understanding of the groundwater flow in the vicinity of the GWTS. The resulting groundwater elevation contour map is presented in Figure 10.

Review of the groundwater elevation contours indicates that overlapping cones of depression can be demonstrated, as required by the Consent Order, for the all but a small portion of the GWTS near extraction well J. This conclusion is consistent with the evaluation of the GWTS conducted by the Companies during the third quarter of this year.

The Companies submitted a letter-workplan to the NDEP on January 17, 2008 outlining a path forward to develop multiple lines of evidence for plume capture in the GWTS area (H+A, 2008). NDEP provided a letter of concurrence on January 24, 2008 (NDEP, 2008a). This program is currently on hold pending resolution of access issues with Basic Remediation Company.

4.4 RENOVATION AND UPGRADE PROGRAM STATUS

No renovation or upgrade work was conducted during the second quarter 2008.

5.0 REFERENCES CITED

Hargis + Associates, Inc. (H+A), 2007. Field Sampling and Standard Operating Procedures, Site-Wide Soil and Groundwater Investigations, Former Montrose and Stauffer Sites, Henderson, Nevada. May 11, 2007.

_____, 2008. Proposed Path Forward to Develop Multiple Lines of Evidence for Plume Capture, Henderson Groundwater Treatment System, Henderson, Nevada. January 17, 2008.

Nevada Division of Environmental Protection (NDEP), 2008a. NDEP Response to: Proposed Path Forward to Develop Multiple Lines of Evidence for Plume Capture, Henderson Groundwater Treatment System, Henderson, Nevada. January 23, 2008.

_____, 2008b. NDEP Response to: Companies Response to NDEP 2/28/2008 Requests: Quarterly Monitoring Report 2007, Fourth Quarter 2007 Groundwater Treatment System Henderson, Nevada. April 11, 2008 and April 14, 2008.

_____, 2008c. NDEP Response to: Response to NDEP Comments on the Conceptual Site Model Former Montrose and Stauffer Facilities and Downgradient Areas to Las Vegas Wash. March 18, 2008 and April 21, 2008.

State of Nevada, 1983. Consent Order by and between the State of Nevada, Department of Conservation and Natural Resources, Division of Environmental Protection; and Stauffer Chemical Company and Montrose Chemical Corporation of California. April 4, 1983.